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**From:** Chang, Steven Y [steven.chang@doh.hawaii.gov]  
**Sent:** 7/31/2017 6:56:07 PM  
**To:** Linder, Steven [Linder.Steven@epa.gov]; Pallarino, Bob [Pallarino.Bob@epa.gov]  
**Subject:** FW: Red Hill problem with SV07  
**Attachments:** 2017 06 15 soil vapor sampling for May 2017.pdf; 2017 05 12 soil vapor sampling for Apr 2017.pdf; Red Hill GW and SV highlights 2016 2017.xlsx

From Rich Takaba. We called Navfac to find out more about the spike in readings. We are waiting for a formal response...

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**From:** Takaba, Richard R  
**Sent:** Thursday, July 27, 2017 10:38 AM  
**To:** Chang, Steven Y <steven.chang@doh.hawaii.gov>; Kwan, Roxanne S <roxanne.kwan@doh.hawaii.gov>; Whittier, Robert <Robert.Whittier@doh.hawaii.gov>; Perry, Thu <Thu.Perry@doh.hawaii.gov>  
**Subject:** Red Hill problem with SV07

We received the April 2017 monthly Soil Vapor Monitoring report on May 12, 2017 (attached).

While other SV points have been trending downward, SV07D under Tank 7 showed a dramatic increase from basically low to 110,000 ppbv in the Deep SV port. SV07S and SV07M were very low.

I have attached an unmodified xls of my review on 6/13/17 of monthly SV from Jan 2016 to Apr 2017, the last available report on R drive. EPA was arriving on 6/19 and I had to go on a trip 6/21.

Unfortunately, you can see I do not have an entry for SV07 in the last month Apr. I think I was fixated on a relationship between SV05 and SV18 which is far away.

If you look at the Apr report attached, the green spike is so vertical I think I mistook it for the Right border. I really have no explanation for missing this. You can also see the Navy stopped putting the actual quant #s in a table with each month in Nov 2016.

And when I arrived back to work on 7/3 I had to recover and work on numerous enforcement sites for other project officers wit Rox, Randy's difficult sites that were given to him for training, the Par Petroleum problem of losing the brine and possible enforcement, emergency call from consultant who pierced a product line last week, and multiple mtgs and hours with my emailed analysis on the new database proj with Windsor vs USTRAC. That was my last three weeks.

On June 16, 2017 we recvd the May SV report (attached). It was not available on the R drive on 6/13 but was probably in my mailbox when I returned on 7/3.

Fortunately, SV07D has dropped to approx. 16,000 ppbv (no quant #s provided), SV07S and SV07M very low.

SV02 shows a blip to 1500 ppbv from 500.

SV05 showed moderate increase to 75,000 in SV05S, <50K in SV05M, SV05D

SV06 showed increases to 3,500 ppbv

SV08, SV09, SV10, SV11 showed similar small increases, with Deep points highest.

SV12 showed significant increase in Mid SV point, but only to 1,500 ppbv.

SV13, SV14, SV15, SV16 show similar low quant increases but significant in relation.

SV18 again shows interesting patterns, why I was drawn to it. Increase to 10,000 ppbv.

SV20 is low and dropping.

Yesterday, on July 26, 2017 we rcvd the June SV sampling report (not scanned yet)

*SV07D has spiked to 175,000 ppb (based only on graph) SV07S, SV07M remain very low*

SV02 – dropped back to 500 ppbv

SV03 – very low no changes in 2017

SV04 – dropped back to very low

SV05 – all dropping, SV05S still highest (since jan 2016) ~50,000 ppbv

SV06, SV08, SV09 – dropped back to low

SV10 – continued increase but only to 1,000 ppbv

SV11 – cont incr to 1,500 ppbv

SV12 – M dropped by S, M incr to 1,200 ppbv

SV13 – rapid spike to 8,000 ppbv in SV13D. SV13S, SV13M also inc to 5,000 ppb.

SV14 – increase but just 600 ppbv M

SV15, SV16, SV17 – blips up but around 500 ppbv

SV18 – both dropped to 7,500 ppbv

I told to Rox to think of Leak Detection documents to request from Navy for Tank 7, Tank 8 or others.

This problem of timely review of Red Hill documents will not occur again. No matter what I'm involved with, I will stop and review each Red Hill rpt hardcopy that arrives in my mailbox from Rox and record dates.

Process: Report arrives, clerical log then Rox, Rox log and scan, hardcopy to Rich mailbox. Rich review, return to Red Hill doc collection site.